

# Academy

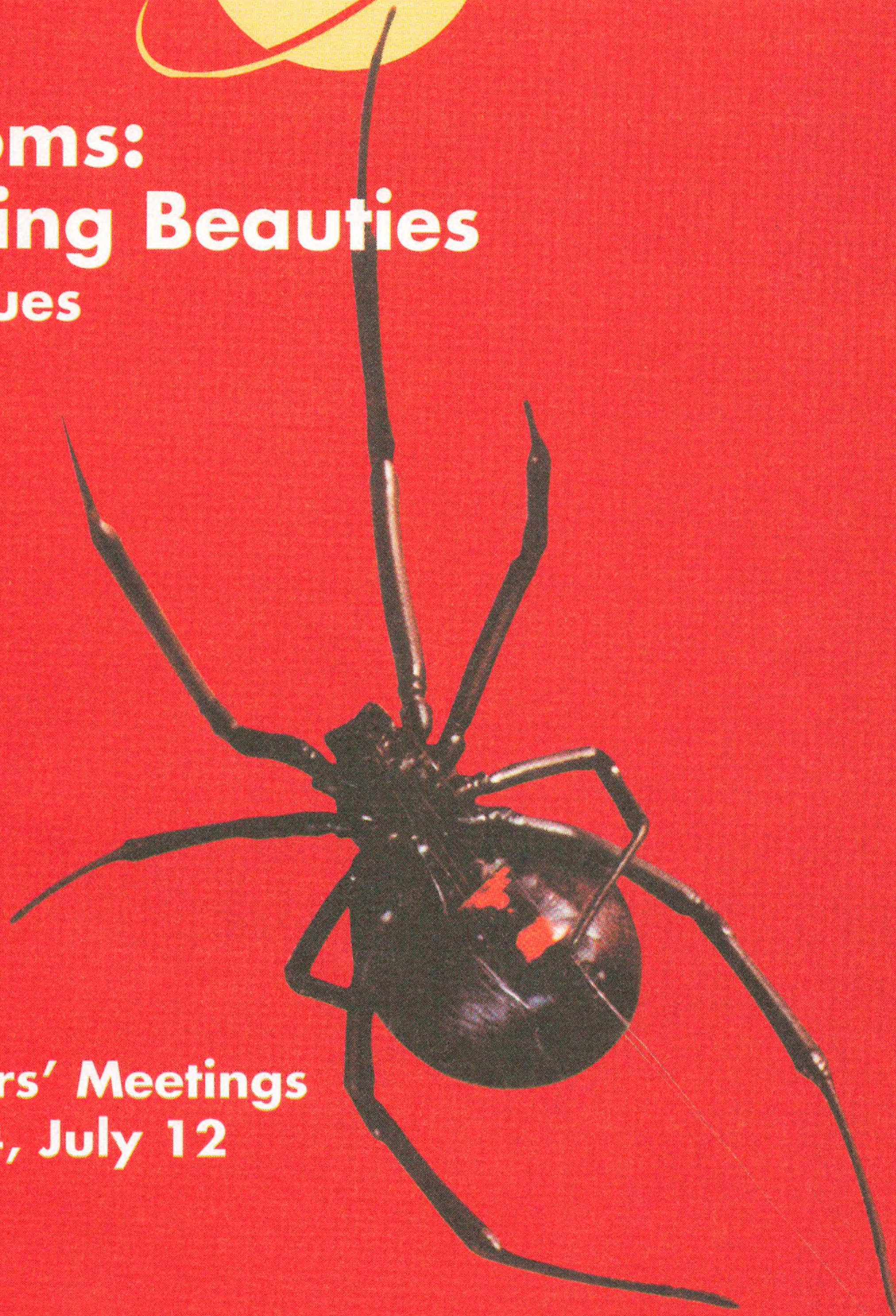
California Academy of Sciences' Member Newsletter

June/July 2000

## **Venoms: Striking Beauties Continues**

**Members' Meetings  
June 14, July 12**

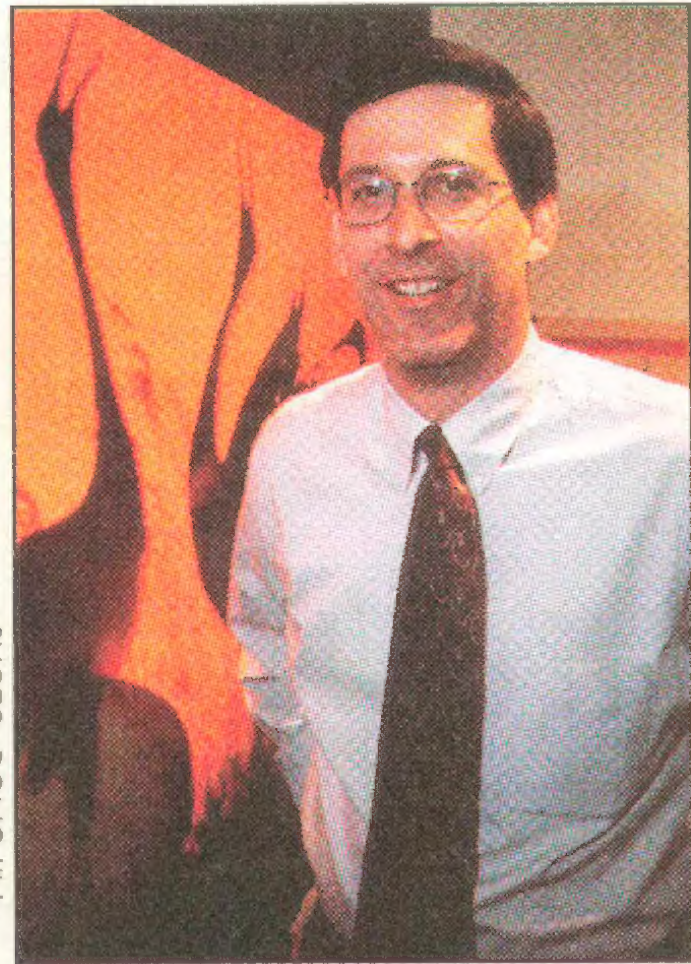
**Drop Dead Ball – July 8**



To explore and explain the natural world

## Message to the Members

Thank you. Thank you a thousand times! This is a great victory for everyone in San Francisco, and especially for our children, grandchildren, and for future generations. To achieve the support of two-



Dr. Patrick Kociolek

thirds of the City's electorate was an immense mountain to climb. This was truly democracy in action, an election where every vote counted. I know many of you, our members, made enormous commitments of time and energy and without your help we would not have made it. I want to thank you profusely.

The two months before the ballot were the busiest—and among the most stressful—of my life. But with the announcement that the Bond issue had passed, all fatigue melted away. I, along with the rest of the Academy, have been fully energized. In anticipation of a successful outcome, much of the groundwork has already been done. Over the next year or two we must immerse ourselves in architecture and planning. We'll keep you informed on our progress.

But I do want to acknowledge two extraordinary people who will not be joining us on this exploration. Last March, Professor William Shack, a long time member of the Board of Trustees passed away. You can read more about Dr Shack's considerable achievements elsewhere in this issue, I want to add that he has been a great friend and supporter of the Academy and his presence and wise, and witty, counsel will be sorely missed.

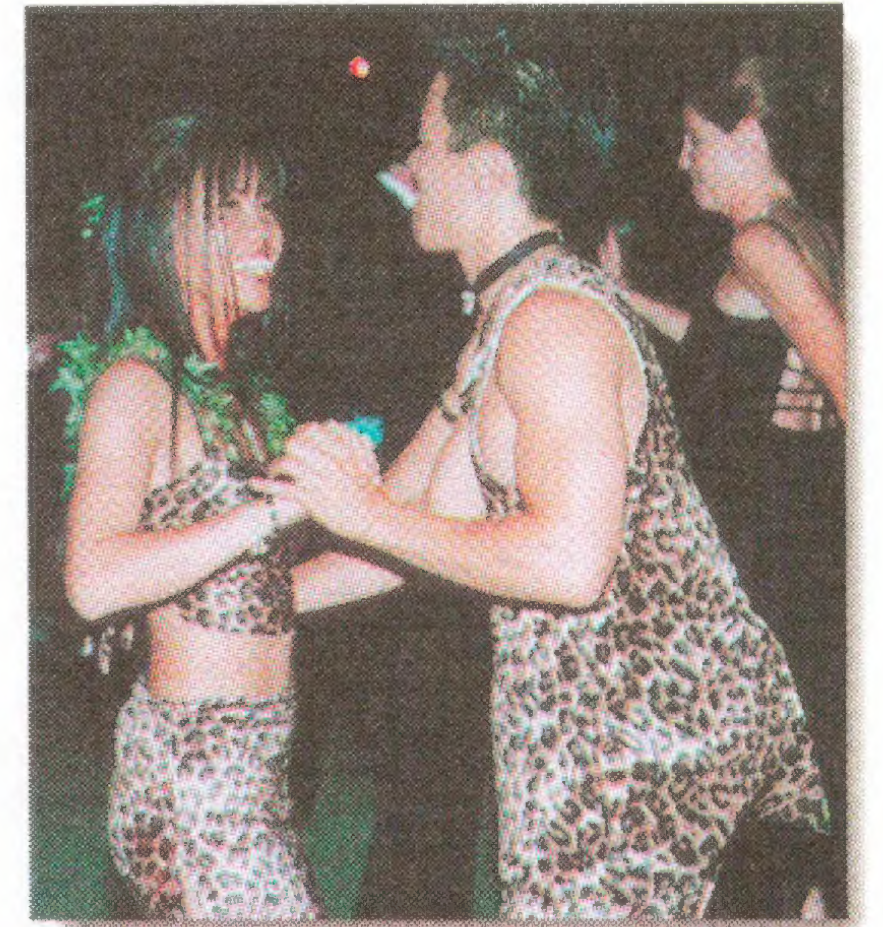
After thirty years with the Academy, the Chair of the Volunteer Services Department, Diane Butler, has chosen to retire. Diane was a charter member of the Docent Council and the first employee of the Docent Program. Since then she has embodied the heart and spirit of the volunteers. Due in major part to her leadership and unabashed enthusiasm for the Academy, the Docent program has grown to become an integral part of our educational goals. We wish her every success along her future path.

Patrick Kociolek  
Executive Director

## The Drop Dead Ball: A Night of Striking Beauties

On Saturday, July 8, put on your black tie or snake skin finery and sssslither on over to the Academy's 9<sup>th</sup> annual summer gala, The Drop Dead Ball: A Night of Striking Beauties. Dance the night away to Dick Bright's SRO, relax to the smooth sounds of Bob Dalpe and the Rose Quartet, enter to win a Rolex compliments of Shreve & Co., and savor delicious hors d'oeuvres by McCall Associates. Enjoy the company of the stars of our newest exhibit, **VENOMS:**

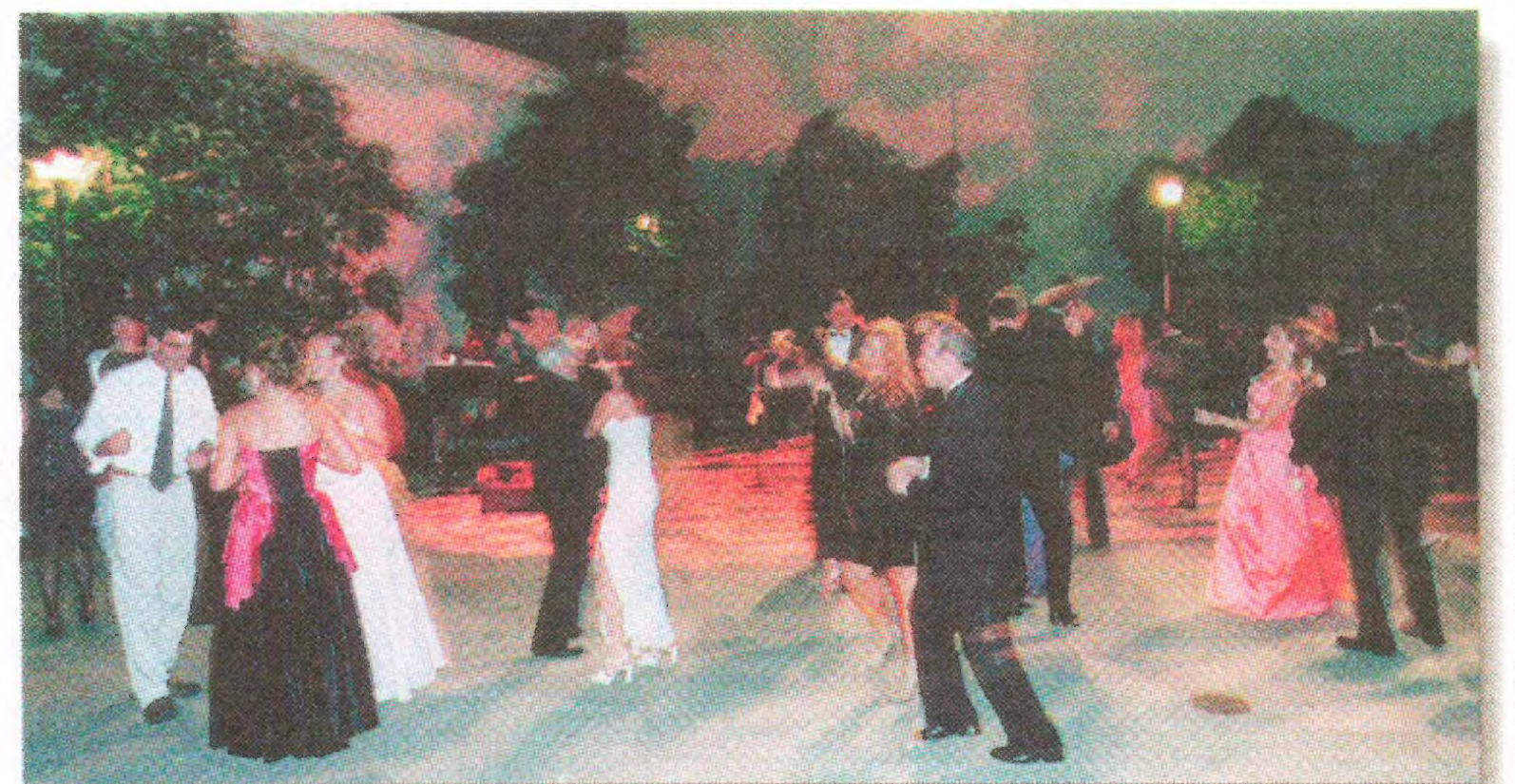
**Striking Beauties** and if you dare, quench your thirst with toxic cocktails, wine, beer and juices.



Formal attire à la NeanderBall

Event co-chairs are Christine Chessen and Megan Fung. Tickets for this year's event are \$100 for members and \$125 for non-members. For further information, please call Anne Rianda at (415) 750-7219. You may also order tickets using the order form on page 14.

Proceeds from the Drop Dead Ball support the Academy's environmental education programs.



NeanderBall Summer Gala 1999

## Classical Music & Birdsong Chat

June 15, 6 pm (PT), Your Computer

Dr. Luis Baptista, Chair of the Ornithology & Mammalogy Department, will be on hand to answer questions via the Internet about new discoveries on the relation of classical music to birdsong. Go to <http://chat.enn.com/> to ask a question or follow the debate.

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# RoundAbout

This past spring, the Academy was buzzing with excitement when the **VENOMS** opening fanfare attracted hundreds of guests and enthusiastic reviews all around. Academy scientists were also busy planning future scientific and conservation collaborations with several visitors from around the world. In February, we were awed by real stories of space exploration from the most traveled man in space, Captain John Young, and in March, we reflected on the contributions of an important Academy friend as we said a final farewell to one of our esteemed Trustees.

## Exhibition Opening and Curators' Reception Attract Big Crowd



PHOTO: DONG LIN

Hugh and Pat Reynolds with Trustee, Sandy Linder at the opening of *Venoms: Striking Beauties*.

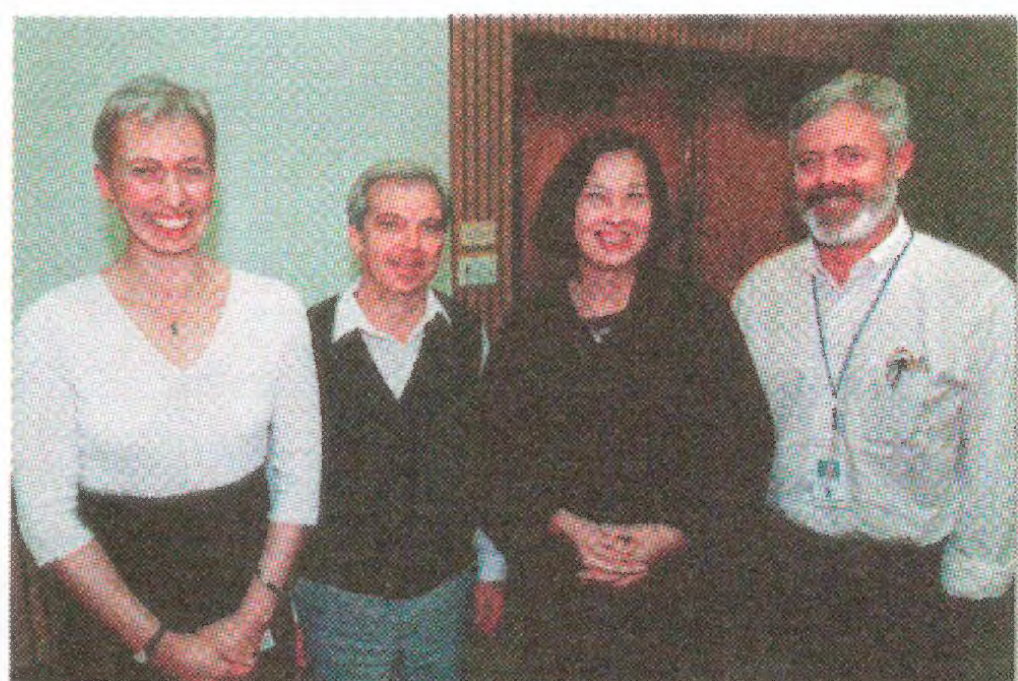
Charles Griswold, and Gary Williams shared accounts of their own hair-raising encounters with venomous animals.

**VENOMS: Striking Beauties** is sponsored by Microsoft Corporation and Bank of America.

## Madagascar Conservationist Visits Academy

Dr. Patricia Wright, Professor of Anthropology at the State University of New York at Stony Brook and Executive Director of the Institute for the Conservation of Tropical Environments, visited the Academy in March to discuss continued and expanded joint research and education efforts in Madagascar. In 1986, Dr. Wright and her colleagues discovered a new species of lemur in Ranomafana, the golden bamboo lemur, which raised awareness about the need to protect this highly endangered species and led to the establishment of Ranomafana, Madagascar as a National Park in 1991.

In recent years, teams of Academy scientists have conducted field research in Ranomafana, developing an understanding of the extraordinary biodiversity of the region as part of conservation efforts to preserve



Patricia Wright (second from right) with Nina Jablonski, Frank Almeda, and David Kavanaugh.

About 850 guests enjoyed simultaneous Academy events on March 23 at the annual Curators' Reception and the opening of our newest temporary exhibit, **VENOMS: Striking Beauties**. Amid live scorpions, a blue-ringed octopus, rattlesnakes, and black widow spiders, curators Joe Slowinski,

a country that has been plagued by deforestation, erosion, desertification, and loss of natural habitat.

## Collaborations With China Continue



Consul General Wang Yun Xiang examines specimens in the Entomology Collection as Chen Futao, Dr. Tuan A. Hoang, and Dr. David Kavanaugh look on.

of China, Wang Yun Xiang, and Chinese Consulate staff and their families, visited the museum to learn about the Academy's joint research efforts with the Kunming Institutes of Botany and Zoology in Yunnan Province, China.

As Academy scientists prepare to return to China for the next phase of collecting flora and fauna as part of the Academy's China Natural History Project, Consul General

## Astronaut John Young Honored



Astronaut John Young, the most traveled man in space, honored at the Academy.

In February, Captain Young was honored by the Academy and the City and County of San Francisco for his contributions to space exploration. In 1972, as Commander of Apollo 16, Young became one of the few humans to walk on the Moon. He had previously orbited the Moon in 1969 aboard Apollo 10. In 1981, he

commanded space shuttle Columbia's maiden voyage into space and is the only astronaut to have flown missions in the Gemini, Apollo and Space Shuttle Programs.

Our thanks to Ken and Debbie Wynans who led the effort to honor John Young and to San Francisco's own Westin St. Francis Hotel. Because of the St. Francis' generosity, John Young and his wife were treated to beautiful accommodations.

## In Memoriam: Dr. William Alfred Shack

In March, we were saddened by the death of a dear friend and scholar, Dr. William Shack, an Academy Fellow and member of the Board of Trustees for ten years. Dr. Shack, Professor Emeritus of Anthropology at the University of California, Berkeley, had a distinguished academic career, holding numerous posts at UC Berkeley for 21 years including serving as Dean of the Graduate Division. He served for 10 years as chairman of the International African Institute in London and was a member of the National Research Council.

## June

## Saving the Gray Whale

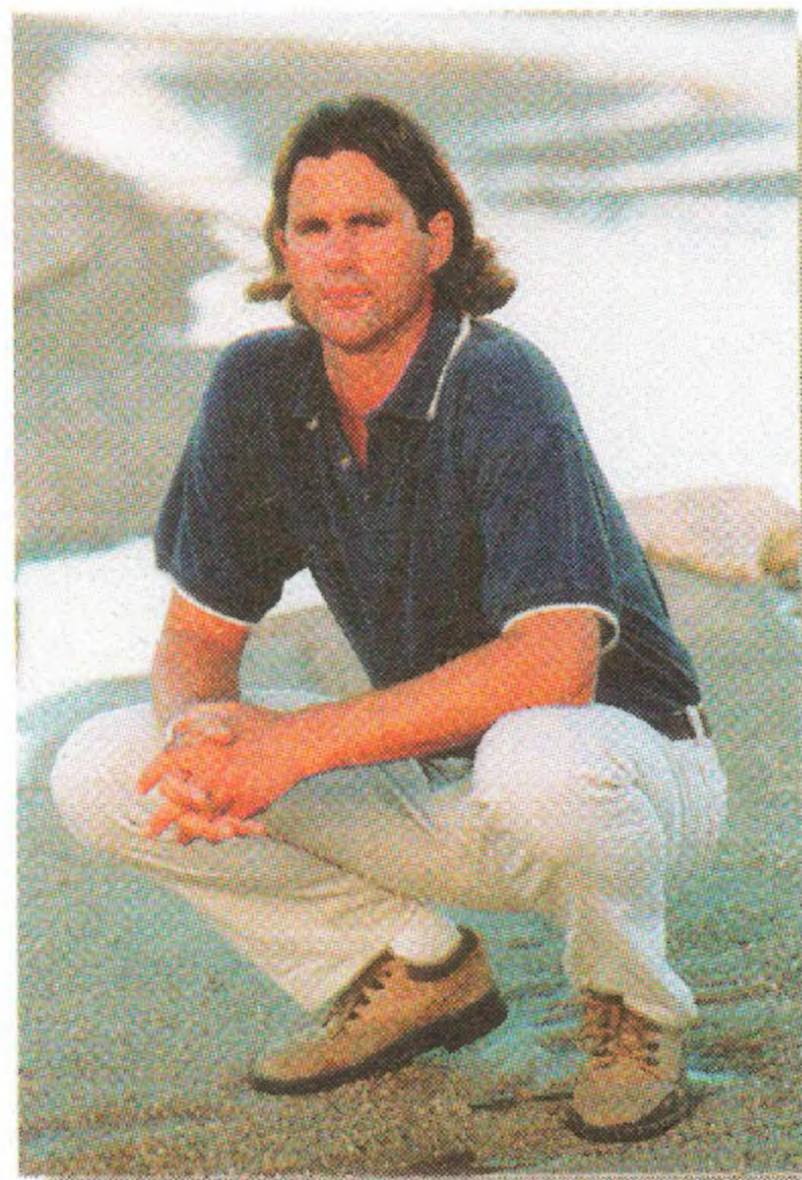
With Serge Dedina, Ph.D.,  
Conservation Director of Wildcoast

Once hunted by whalers and now the darling of ecotourists, the gray whale has become part of the history and politics of Mexico's most isolated region. After the harvesting of gray whales was banned by international law in 1946, their populations rebounded. While they are no longer hunted for their oil, these creatures are now chased up and down the lagoons of southern Baja California by whalewatchers.

Dr. Dedina will present a lecture and slide presentation on conservation politics, putting a human face on wildlife conservation. He recently authored *Saving the Gray Whale: People, Politics and Conservation in Baja California*.

Dedina grew up in San Diego and spent the last twenty years traipsing the back roads and surfing the remote coastline of the Baja California peninsula. He holds a Ph.D. in Geography from the University of Arizona, and is currently Conservation Director of Wildcoast, an international conservation team preserving the last coastal wildlands of the Californias.

Wednesday, June 14 2 pm & 7:30 pm  
Morrison Auditorium  
Book-signing to follow lecture.



Serge Dedina, author of  
*Saving the Gray Whale*

PHOTO: TOM SPITZ

the sanctuary during the winter months, while humpback and blue whales arrive in early spring to feed on the nutrient-rich waters of the Monterey Submarine Canyon through late fall. Sooty shearwaters and many other transequatorial migrant seabirds join the feast in the hundreds of thousands.

Join Shearwater as she introduces us to this amazing world beyond the shore with a slide/lecture presentation. She is the founder of Shearwater Journeys in which seabirds and marine mammals are a major focus. She has also worked on research programs focusing on blue whales, Risso's and Pacific white-sided dolphins, and was a major contributor to the killer whale photo-identification project.

Wednesday, July 12 2 pm & 7:30 pm  
Morrison Auditorium

**All the above lectures are FREE for Members as a benefit of your Membership. Members' guests are \$10.**

## Upcoming Lectures

## Eye of the Storm

with science journalist Jeffrey Rosenfeld

Wednesday, August 9

Chasing Snakes in Burma:  
Herpetology in the Golden Land

with Joe Slowinski, Assistant Curator of Herpetology.

Wednesday, September 13

Many thanks to the following members who have increased their support of the Academy and its Annual Fund in the last two months:

Anthony & Kathleen Ahearn  
Dr. Adrienne Applegarth  
Ms. Maria Bacigalupo  
Mrs. Yvonne Baker  
Mitch & Barbara Barbee  
Marc Batten  
& Christine Weldon  
Mr. & Mrs. Robert Berry  
Allen & Victoria Brignetti  
Mr. & Mrs. Leopoldo  
Caltagirone  
John & Nancy Cassidy  
Mr. Daniel M. Champeau  
Mrs. Jean Chickering  
Mr. & Mrs. Henry B. Clay  
Roger & Cindy Collins  
Mr. & Mrs. Stone Coxhead  
Mrs. Isabella E. Davis  
Dr. T. R. Delebo  
David & Michelle Dollinger  
Brian & Sheryll Ebbs  
Andrea M. Ellman &  
Lauren Standig  
Russell & Caroline Emmett  
Donald Frediani &  
Renata Gasperi  
Jeff & Bonnie Freiberg  
Mr. Fred Grafton  
Lloyd & Sandra Harvego  
Mr. & Mrs. E. David Hetz

Mr. Michael J. Kelly  
Robert & Terry Keyes  
Ms. Katherine Kiehn  
Ying Ming Li &  
Erin Williams Li  
Mr. & Mrs. Francis Ludwig  
John & Susannah Maddock  
Elizabeth & Felicia Madriz  
Neil & Marianne Marck  
Paul Muldown &  
Carol Hansen  
R. Douglas & Susan Norby  
John & Tracy Novick  
Michael & Nancy O'Connor  
Ms. Maureen O'Connor  
Bruce & Vicki Pate  
Herbert & Margarita  
Rosenthal  
Gregory & Barbara Rosston  
Herbert & Laverne Schmidt  
Ms. Loretta Shepard  
James & Pamela Snedigar  
Mr. Jay Stewart  
Mr. & Mrs. Edward J. Taaffe  
Dr. & Mrs. C. D. Thorpe  
Mrs. Winifred Valens  
Marc & Shelly Wallace  
Mr. & Mrs. Bruce Willock  
Keith Yamamoto &  
Kathleen Raneses

## July

## Seabirds and Marine Mammals of Monterey Bay

With Debra Love Shearwater, Field Ornithologist

The Monterey Bay National Marine Sanctuary, the largest federally protected area in the lower 48 states, is host to a wide variety of marine mammals and seabirds. The entire population of gray whales parades through



Humpback whale flukes

PHOTO: MONT. R. BRANSON

# VENOMS

## STRIKING BEAUTIES

*I caught myself a baby bumblebee,  
Won't my mama be so proud of me,  
'Cause I caught myself a baby bumblebee,  
Ouch! It stung me!*

—children's nursery song

Many of us have found ourselves at the receiving end of a bee's attempt to defend itself against what it perceives as certain annihilation. We often blame the bee's stinger for the pain we feel, and rightly so, although it is only indirectly responsible—the swelling and lingering soreness (and in some cases, a more serious reaction) is caused by venom. How does the venom get there? We know that it comes from the bee's stinger, but *how* does the bee use its stinger to inject venom?

The Academy's current temporary exhibit, **VENOMS: Striking Beauties** reveals the methods of delivery that venomous animals use to inject their dangerous doses. Bees, wasps, and scorpions all use hypodermic needle-like stingers to pierce

the skin and inject venom into their prey. Stingers come in different textures; scorpion stingers are smooth

(some scorpions can even spray venom from their stingers!), while honey bees' stingers are barbed. In fact, a honey bee can only sting once—the barbed stinger remains in the victim's flesh after it is used and the honey bee dies shortly afterward.

Stingers are only one of six different mechanisms used by venomous animals to inject their toxins. To learn about other delivery mechanisms, and to see them in action, visit the **VENOMS: Striking Beauties** exhibit. Just be careful where you put your hands!



PHOTO: E. S. ROSS

Worker bee has hypodermic-like stinger

## A THOUSAND CRANES

If you haven't yet visited **A Thousand Cranes** featuring photographs by Wu Shao-Tung, do so before the exhibit closes on July 30. Also on display are crane specimens from the Academy's collection, jade and bronze crane statues on loan from the Asian Art Museum, and John James Audubon's rare Double Elephant *Birds of America* folio.



PHOTO: S.T. WU

Red-crowned cranes

### Special Events

Discover the fascinating natural and cultural history of cranes through hands-on activities and demonstrations. For more information visit [www.calacademy.org](http://www.calacademy.org) or call (415) 750-7145. All programs will be held in the Cranes exhibit area unless otherwise noted and are free to Academy members.

#### Paper Crane Folding

Make your own crane to take home as origami artist Vicky Mihara Avery explains the cultural meaning of this traditional Japanese craft.

June 18, 24, July 9, 23 11:30 am to 3 pm

#### Painting "The Book of Cranes"

See a live crane painting demonstration and hear the story of artist Clare Cooley, author of *The Book of Cranes*.

June 4, July 16 12:30 to 3 pm

#### Cranes in California!

Explore the lives of the Sand hill cranes of California through an interactive presentation by crane naturalist Bruce Foreman. This program is presented in collaboration with the California Department of Fish and Game.

June 18 11:30 am & 2:30 pm  
Courtyard



PHOTO: S.T. WU

Sand hill cranes

## Special Events, cont.

This summer, we will continue to offer our most popular venom programs as well as a few new presentations that will shed light on the intriguing lifestyles, biology and evolution of venomous animals. For more information visit [www.calacademy.org](http://www.calacademy.org) or call (415) 750-7145. All programs will be held in the **VENOMS** exhibit area, and are free to Academy members.



PHOTO: MARK SEWARD

Gila Monster

### "Killer Bees": The True Buzz

Join us for a special program to learn why bees are important and the real threats "killer bees" pose to humans.

June 4, 29, July 2, 14 12:30 and 2:30 pm

### Color Me Deadly

Venomous animals, such as the Sonoran coral snake, often use bright colors to advertise their lethal natures. Join us for a coloring adventure and take home your own colorful venomous creature.

June 6, July 18 12:30 & 2:30 pm  
(Appropriate for ages 5 to 10)

### Black Widows To Go

Drop by to make your own black widow using paper and other craft materials. Learn to tell the difference between black widows and other non-venomous spiders.

July 6 12:30 pm  
(Appropriate for ages 5 to 10)

### Striking Fishes

Touch the stinger of a bat ray, see a dangerous stonefish, or feel the long spines of a scorpion fish. Learn how these fish use venom for protection in the wild.

June 8, 22, July 13, 16 1 pm

### Rattlesnakes Alive!

Get up close and personal with a live Northern Pacific rattlesnake from the Bay Area as naturalist Katie Colbert discusses their intriguing habits. Learn why it is important to

protect them. This program is presented in conjunction with the East Bay Regional Park District.

June 11, July 23 12:30 & 2 pm

### Snake Mimicry

Meet live snakes, and discover how some snakes play tricks on predators by changing their appearance and behavior.

June 13 12:30 pm & 2:30 pm

### Dangerous Liaisons

Experience the extraordinary world of venomous insects and spiders through a hands-on presentation by the Insect Discovery Lab of San Francisco State University.

June 14, 20, July 11, 27 2 pm

### Let it Bee Venom

Meet a live colony of bees and explore their venomous nature and behavior with U.C. Davis apiculturist Dr. Eric Mussen.

June 15, July 25 12:30 pm & 2:30 pm

### Tarantula: Beauty or Beast?

Join us for a live tarantula presentation. On Father's Day, discover the unusual mating habits of these oft-maligned arachnids.

June 18, July 22 12:30 & 2:30 pm

### Evolution of Warning Coloration and Mimicry on Coral Reefs

See *Venoms Lecture Series*, page 8.  
June 26

### Studying Venomous Snakes

See a snake biologist in action and participate in an interactive presentation as we uncover the elusive world of venomous snakes.

June 24, July 30 12:30 & 2:30 pm

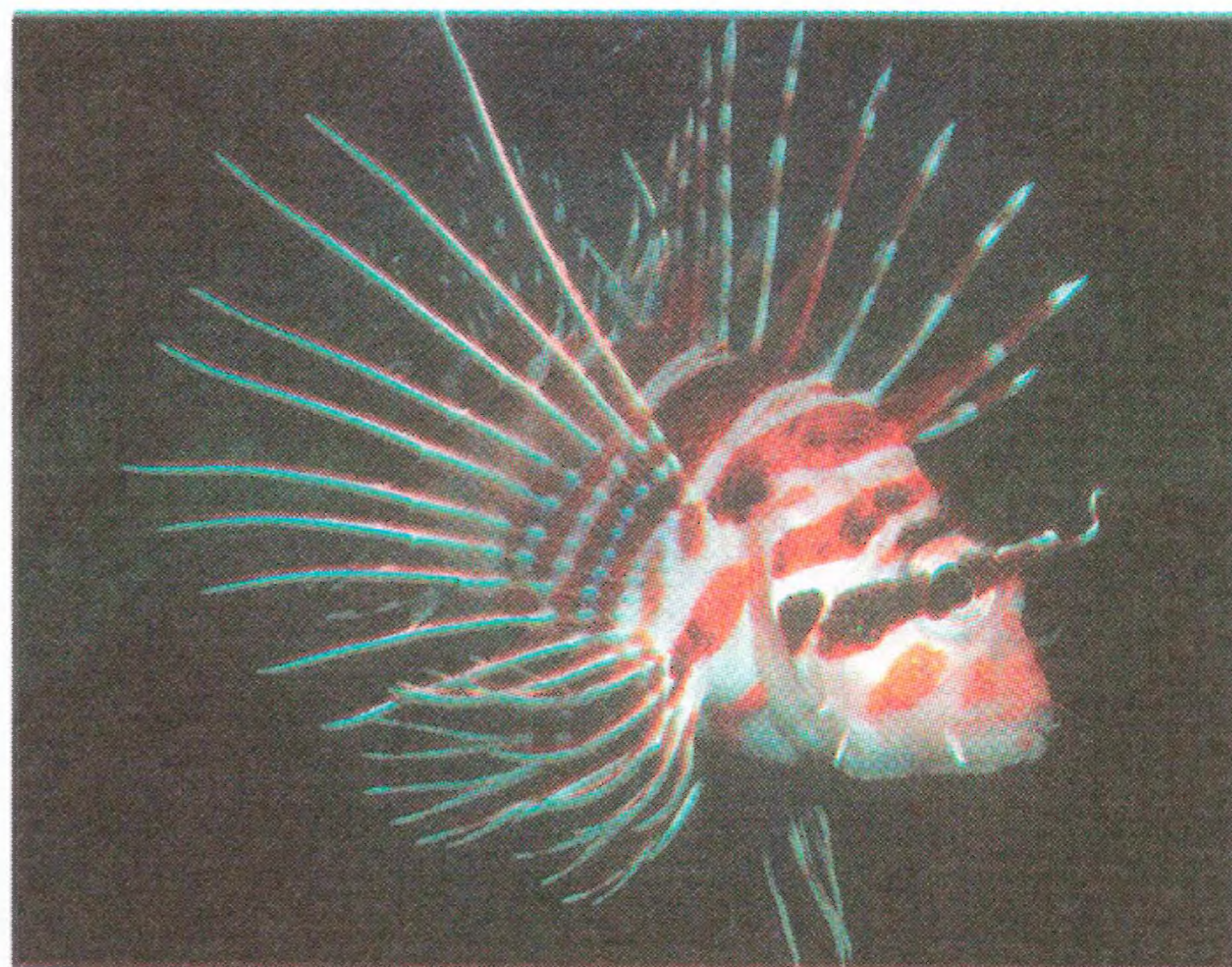


PHOTO: E. S. ROSS

Lionfish

## Traditional Arts of the World

All programs take place at 1 pm on select Saturdays in the Morrison Auditorium. Presentations are free after general museum admission, and no reservations are needed. For further information on these and other Traditional Arts Programs, contact Dr. Jennifer Michael in the Anthropology Department at (415) 750-7165. The Traditional Arts Program is funded by the Paul L. and Phyllis Wattis Foundation.

### June 3—Asian Treasure Bag

Robert Kikuchi-Yngojo and Nancy Wang of Eth-Noh-Tec present their unique brand of Asian American storytelling theater, incorporating music and dance with elements of Eastern and Western performance. This program, which features folktales and myths from Korea, China, Japan, and the Philippines, is appropriate for all ages.



Nancy Wang and Robert Kikuchi-Yngojo

### June 10—Guatemalan Weaving

Albertina Chumes Lopez, visiting the Bay Area from the village of Santa Caterina-Palopó in the highlands of Guatemala, will demonstrate the technique of weaving on a traditional backstrap loom and discuss the colorful clothing made from these handwoven fabrics.

### June 17—"Boss Blues Harmonica"

Tommy Meisel and his Blues Band offer a toe-tapping, jump-up-and-dance concert of lively blues music in the Chicago style.

### June 24—Korean Cooking: The Art of Kimchee

Hae-Soog Jo, visiting the Bay Area from Korea, will discuss the making of kimchee (kimchi), a Korean relish or condiment made of spiced and fermented cabbage. There are more than 100 kinds of kimchee; the kind best known in the United States is seasoned with quantities of red pepper. Ms. Jo will prepare and offer samples of white kimchee in this demonstration.

### July 22—"The Stolen Bairn and the Sídh"

Storyteller and harpist Nancy Thym tells this Scottish Highland tale of a woman whose baby is stolen by the fairies. The tale is enhanced by Scottish ballads played to the accompani-

ment of the Scottish harp known as the Clarsach.

### July 29—Breads of India

Kirin Bawa, from Breads of India, will discuss and demonstrate some of the special breads that are part of Indian cuisine. These might include roti, naan, chapati, poori, paratha, or any of the hundred-plus types of bread that form this Berkeley restaurant's repertoire.



PHOTO: JENNIFER MICHAEL

Harpist and storyteller, Nancy Thym

## Junior Academy

Junior Academy goes to camp this summer! Choose from several exciting one-week Camp Academy programs.

### Junior Explorers

6 – 8 years old  
5 sessions from July 10 to August 18

### Golden Gate Park

9 – 12 years old  
5 sessions from July 10 to August 18

### Marine Biology

11 – 14 years old  
June 19-23

### Pepperwood Ranch

10 – 12 years old  
June 26-29

### Sierra Field Ecology

12 – 15 years old  
July 31 – August 4

**Please note age restrictions are firm. These programs fill quickly. We recommend early registration.**

**To check on Camp Academy availability, please call the class hotline: (415) 750-7575. For registration information, refer to the Order Form on page 14.**

### On Our Cover

Female black widow spiders are marked by a distinctive red hourglass design and possess highly toxic venom that is believed to be 10 to 15 times more potent than rattlesnake venom.

## Special Lectures

Lectures will be held in Morrison Auditorium at 7:30 pm. The **VENOMS: Striking Beauties** exhibition will be open from 6:30 to 7:30 pm preceding the lectures offered in conjunction with the exhibit. All lectures are \$6 members/\$10 non-members.

## Up Close and Inside California Native Flowers

Margaret Ely  
Regional Parks Botanic Garden, Berkeley

The artist Georgia O'Keefe once described flowers as friends, adding that they take a lot of time to look at and be with, in order to see what's really there. Join photographer/gardener Maggie Ely on a stunning visual tour of California native flowers photographed through a dissecting microscope. As Ely describes the form and function of the blossoms, learn how each flower has evolved and met its own pollination needs while providing food to insects and birds. Discover how the dots or lines on an iris guide an insect to the exact location of the nectar or pollen, why many forest plants have white or highly dissected flowers and why many rainy-season blooms hang down. The sheer aesthetic beauty of Ely's images offers a rare and original view of our California native flowers.

June 22 (Thursday) 7:30 pm



PHOTO: M. PARKER ELY

Nootka rose *Rosa nutkana* var. *nutkana*

## The Venoms Lecture Series

## The Evolution of Warning Coloration and Mimicry on Coral Reefs

Terrence Gosliner  
Provost and Senior Curator, California Academy of Sciences

It is well known that some insects and other terrestrial animals have adopted bright color patterns to warn predators that they are poisonous or distasteful. Others have mimicked their patterns as a protective measure. Only recently has it been discovered that many of the marine organisms inhabiting coral reefs have developed the same defensive strategies. These toxic or venomous organisms are advertising to predators that they should be avoided. Gosliner discusses the evolution of these color patterns as striking examples of natural selection at work in the world's oceans.

June 26 (Monday) 7:30 pm

Cnefarious Cnidarians:  
Aggressive Anemones and Stinging Jellyfish

Daphne Fautin  
Professor of Biological Sciences, University of Kansas

Jellyfish belong to the animal group called Cnidaria (with a silent C). Jellyfish are associated with their ability to sting humans, sometimes very painfully and with serious consequences. They use highly toxic, microscopic harpoon-like structures known as nematocysts, their only weapon for self-defense and food capture. This is also true of the closest relatives of jellyfishes, including sea anemones, corals, sea fans and the high-school biology lab standard, hydra. These animals are very simple and are usually regarded as being primitive. However, nematocysts are the most complex structures produced by animals, and the firing of the dart is perhaps the most rapid biological motion known. Fautin discusses the ways that the beautiful cnidarians use toxins in their amazing nematocysts.

August 22 (Tuesday) 7:30 pm

## Adult and Family Education

## Pine Needle Baskets

Workshop

Pine needle baskets have a look of solid beauty. The Seminole Indians wove these baskets for use in their daily chores. The techniques they used can easily be learned in this workshop. Hubbard demonstrates several traditional weaving techniques and guides us as we construct our own version of the pine needle basket.

Kathleen Hubbard  
June 17 (Saturday) 10 am – 4 pm  
Cost: \$60 members/\$70 non-members  
(Includes all materials)

## Flora of Mt. Lassen National Park

Seminar and Field Trip

Mt. Lassen, the southernmost outpost of the volcanic Cascades, is one of our least-visited national parks. Representing some of our prettiest mountain scenery, this is where the Cascade flora meet and mix with the northern Sierra. Observe the meadows, lakes and ponds, great conifer forests, and alpine wildflowers of this region, and discover rare flowers in special pockets along the Feather River. Learn to recognize the trees and shrubs, and the basics of keying wildflower families. Accommodation Thursday, Friday and Saturday nights is at the Mineral Lodge in Mineral, CA.

Glenn Keator  
Seminar: August 2 (Wednesday) 7 – 8:30 pm  
Field Trip: August 10 – 13 (2 pm Thursday – 2 pm Sunday)  
\$395 members/\$420 non-members  
(Includes accommodation. Does not include transportation and meals)

## Natural History of the Mono Basin

### Field Trip

Join David Wimpfheimer on an exploration of one of the most dynamic ecosystems on the planet: Mono Lake. Begin the weekend kayaking along the lake's south shore, dotted with strange tufa towers and filled with hundreds of phalaropes feeding on brine shrimp. The calcium carbonate tufa towers are just one geologic aspect of a basin that



PHOTO: GERALD & BUFF CORSI

Mono Lake

contains the oldest lake on the continent and the youngest mountain range, described by John Muir as the "actions of fire and frost in the making of so much beauty." Saturday's focus, Lundy Canyon, carved out by dramatic glacial action, exhibits great plant and wildflower diversity. The rest of the weekend features several short hikes to young volcanoes, sagebrush meadows, streams and mixed conifer woods, home to Green-tailed Towhee, Sage Thrasher and Townsend's Solitaire, which should be at the peak of their breeding activities. The emphasis of the trip is on the rich natural history of this region, but we will also discuss the effects of human activity on the main resource, water.

Accommodation Friday and Saturday nights is at Murphey's Motel in Lee Vining, CA.

*David Wimpfheimer*

*July 28 – July 30 (9 am Friday – 3 pm Sunday)*

*\$365 members/\$395 non-members*

*(Includes accommodation and kayak rental. Does not include transportation and meals)*

## The San Andreas Fault – Up Close and Personal

### Seminar and Field Trip

The San Andreas Fault, one of the longest (1200 km) and most active faults in the world, has been the source of two large earthquakes in historic times: in 1857 near Fort Tejon in south-central California, and in 1906 centered near San Francisco. Both earthquakes, of approximately 8 magnitude, resulted from a rupture of several hundred kilometers of the fault. The recurrence of such events, as well as smaller quakes during the last 20 million years, has resulted in 160

km of total displacement along the fault. This has led to spectacular geologic features along much of its length in coastal California. Start learning basic facts about faults and earthquakes in a 90-minute seminar at the Academy. During the bus trip, follow the fault from Daly City where the San Andreas comes onshore, through the Crystal Springs Reservoir area and down along the Peninsula. The final stop will be in Menlo Park to visit the U.S. Geological Survey. View the data center where continuous seismic monitoring of the fault is performed, and learn about ongoing earthquake research.

*Ivan Wong*

*June 24 (Saturday) 9 am – 5 pm*

*\$45 members/\$55 non-members*

*(Includes bus transportation)*

## Monterey Bay Wildlife Cruise

### Field Trip

Join naturalist Greg Meyer for a cruise in the nation's newest marine sanctuary. Sea otters, seals, sea lions, whales, dolphins and thousands of seabirds live in the waters of the Monterey Bay National Marine Sanctuary. This seven-hour cruise covers the wildlife-rich kelp beds and the deep waters of the Monterey Bay Submarine Canyon. Blue Whales make an annual appearance in Monterey Bay, and this is the best time to see them. Opportunities abound for spotting over 90 species of marine birds that visit the Bay, including shearwaters, murre and albatrosses.

*Greg Meyer*

*August 19 (Saturday) 7:30 am – 2:30 pm*

*\$65 members/\$75 non-members*



PHOTO: SHERRY BALLARD

Monterey Bay

## Exploring Mt. Saint Helena

### Field Trip

Come to Calistoga and starting at 2,960 feet take a leisurely trek through Robert Louis Stevenson State Park. Head for the

## Adult and Family Education, cont.

lookout station on the summit of Mt. Saint Helena at 4,344 feet. Along the way, search for colorful red, black and yellow-banded King Snakes and Blue-Bellied Lizards. Listen to Acorn Woodpeckers as they call loudly from tree to tree. Explore pristine California chaparral and oak woodland habitat. As Red-tailed Hawks soar high above, enjoy a bird's eye view of the fertile Napa Valley below. Open to families with children eight years and older.

*Chris Giorni*

*June 3 (Saturday) 10 am – 3 pm*

*\$20 adult/\$15 child, members*

*\$25 adult/\$20 child, non-members*

### Discover Devil's Gulch

Field Trip

Devil's Gulch is a tributary to Lagunitas Creek in Samuel P. Taylor State Park, Marin County. Its easy accessibility and small size make this special basin an ideal location to learn about basic stream ecology, physical characteristics of creeks and stream/watershed interactions. California creeks and streams are characterized by a flood/drought cycle caused by the typically wet winters and dry summers. These conditions create a unique habitat, which is easily observed at Devil's Gulch. Spend a day hiking the gentle path along this beautiful creek, getting a good overview of stream and riparian biota. Observe the functional aspects of California coastal streams and basins, and learn about the problems facing local watersheds. Using dip nets, search for aquatic invertebrates and keep an eye out for juvenile Coho salmon and Steelhead trout. Open to families with children ten years and older.

*Byron Amerson*

*June 17 (Saturday) 9:30 am – 1:30 pm*

*\$20 adult/\$15 child, members*

*\$25 adult/\$20 child, non-members*

## Benjamin Dean Lecture Series

### Stories Under the Stars

In June, July and August, the Morrison Planetarium presents its annual series of storytelling under the planetarium sky. This series, designed to include the younger members of the Academy, is fast becoming a family tradition. Join us for three special evenings of lore that will inspire your imagination and delight your sense of wonder.

### Splendid Skies Over North America: Tales Both Tall and Wide of Our Starry Nights

*Lucinda deLorimier*

What great American humorist came in with the 1835 passing of Halley's Comet? And then correctly predicted he'd go out with its next passing? It was Mark Twain, who was aware throughout his whole life, that the famous comet was visible

when he was born. He said he and the comet were "two unaccountable freaks; they came in together, they must go out together."

Unaccountable? Why, if Mr. Samuel Clemens had only known

of all the stories that account for stars, constellations, planets, comets and meteors, which have arisen from our continent's folks, he'd have been able to also predict his own long-lasting, celestially brilliant reputation!

North America has a rich tradition—from Native American stories, through early United States tall tales, to current-culture comet hysteria—of the hows and whys of what we believe about the night sky. Lucinda deLorimier will tell stories, old and new, to highlight these traditions.

*June 20*

### The Story of the Universe

Mary Ellen Hill accompanied by Alan Tower

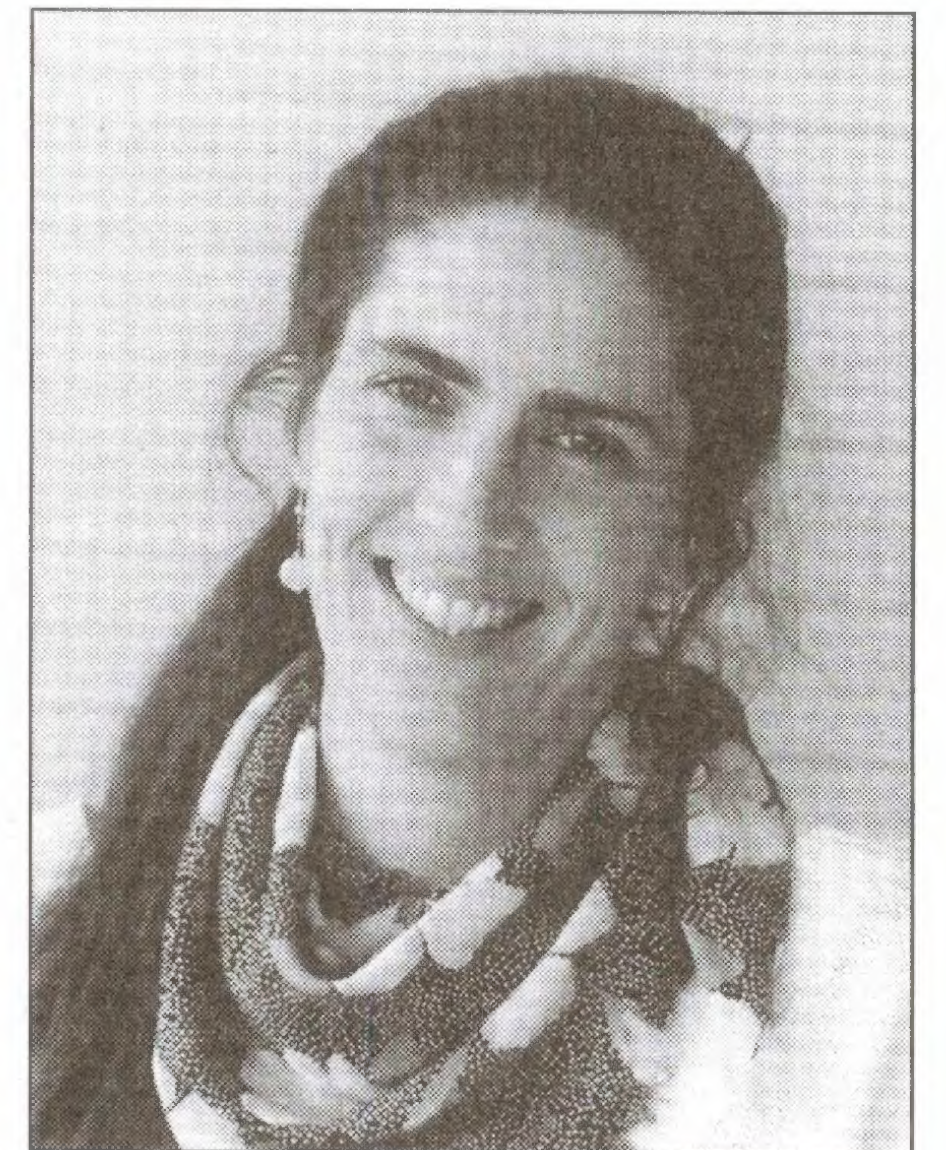
Mary Ellen Hill returns to the Morrison Planetarium for a repeat performance of her magical weaving of contemporary science and ancient mythology about the Universe from which we all emerged. She will take you from the initial blooming of the Universe 15 billion years ago to the creation of atoms, stars, galaxies, solar systems and life while

complementing some of these creative moments with wisdom stories from indigenous peoples. Since sound was present from the beginning, the words spoken will be more deeply expressed by the primal tones of the aboriginal instrument, the *didjeridu*, and a triple ocarina, known as a *huaca*. These instruments will be played by Alan Tower, featured in the latest Ellipsis Arts Book/CD and considered the most accomplished composer on the huaca today.

*July 18*



*Lucinda deLorimier*



*Mary Ellen Hill*

## Sky Stories From Latin America

Olga Loya

Celebrate the magic of the triumph of Los Cuentos (the stories) with Olga Loya as she shares her Latin American heritage with us. The heavens above were incorporated as an important part of the cultures of all early peoples. Listen to how the Aztecs, the Incas and the Mayans wove their interpretations and explanations of the natural world into a rich tapestry of myths. Hear the rhythm of vocal passages reinforced by the pulsing of drums, and be prepared to become part of the performance as Olga draws you into her magic circle. Stories will be in English with Spanish segments.



Olga Loya

August 8

**All lectures are in the Morrison Planetarium at 7:30 pm. Tickets at the door, \$3.00 or call the Information Hotline: (415) 750-7141.**

### Morrison Planetarium

In June and July, about an hour and a half after sunset, the Milky Way arches gracefully across the eastern sky. Look south, towards the teapot-shaped constellation Sagittarius the Archer. You are looking right into the heart of our galaxy, seething with star clusters, nebulae and dust clouds. Face away from the Milky Way, and hold your thumb out at arm's length. Your thumb is blocking the light from about one million galaxies, many larger than our own. These are just some of the wonders waiting for you in the Summer and Autumn sky.

And now for something a little different for younger astronomers out there! This summer, the Planetarium will be offering a Family Show at 11:30 am weekdays, and 12 pm weekends. Saturday, Sunday, and Monday, this show will be **Neighbors in Space** featuring our old friend Moon Mouse. On Tuesday, Wednesday and Thursday, we will present *Worlds Beyond Earth* – a tour of the Sun and its family of planets and *New Worlds* – what our solar system might look like to an outsider.

Buzz Aldrin, the second man to walk on the Moon, will speak about and sign copies of his new novel, *The Return*, Friday, July 7. This event begins at 7:30 pm in Morrison Planetarium. Please call Morrison Planetarium's information line at (415) 750-7141 for details.

## Sky Shows

**The Planetarium will be closed June 12 through June 15 for the installation of our new feature show "Into the Depths of Night."**

### Into the Depths of Night

Double stars, extrasolar planets, nebulae, supernovae, galaxies... take a tour of the celestial sights visible in the summer and Autumn skies. Discover how the far-flung wonders of the Universe connect to each other ... and to us!

Opening June 16

Weekdays 2 pm & Weekends 2,3 pm

### Solar System 2.0

How many moons does Earth really have? Are planets orbiting beyond Pluto? Is Pluto even a planet? If you thought you knew all there was to know about the planets, come explore how new discoveries are revealing strange new facts about our Solar System.

June 1 – June 11 Weekdays 2 pm & Weekends 2,3 pm

June 16 – June 30 Weekends 1 pm

July 1 – September 3 Weekdays 12:30 pm & Weekends 1 pm

### Mysteries of the Millennia

What cosmic mysteries wait to be solved as we enter the 21<sup>st</sup> Century? How has our understanding of our place in the Universe changed with the coming of each new millennium?

Weekends 1 pm, Show ends June 11

### Neighbors in Space

Cosmic cartoon critter, Moon Mouse, leads an exploration of the Sun, Moon, and the planets of the solar system. Neighbors in Space is offered in the morning for the convenience of members with younger children.

Weekends 12 pm

### Family Show

A rotating series of shows for younger audiences. Complete show schedules and descriptions are available on our website at [www.calacademy.org/planetarium](http://www.calacademy.org/planetarium). For group reservations, call the Planetarium Office at (415) 750-7127 during business hours.

July 1 – September 4, Weekdays 11:30 am & Weekends 12 pm

### The Sky Tonight

A relaxing tour of the current night sky, focusing on constellations, visible planets, the phase of the Moon, and upcoming celestial events visible with the unaided eye. This is our most free-form presentation, where the sky is the "star of the show".

Weekends 4 pm

Beginning July 1, this show will also be offered on weekdays at 3:30 p.m.

**Show schedules are subject to change. Additional shows will be added on the first Wednesday of each month, and for certain holidays. Please call (415) 750-7141 for details.**

## GET WET!!

The Touch Tidepool needs volunteer interpreters on weekday afternoons to assist our visitors with the correct procedures for interacting with the invertebrates in the tank. If you are available for a two-hour shift between the hours of noon and 4 pm, Monday - Friday, we need you!

Training will be provided and you may set your own schedule. Once a month is acceptable, twice a month is desirable, weekly is ideal. Please call the Volunteer Office at (415) 750-7154 for details and an application. Thank you.



PHOTO: J. JOHNSON

## From Dinosaurs To Diamonds

San Francisco Gem and Mineral Society's 46th Annual Golden Gateway To Gems Show and Sale

**August 5 & 6**

San Francisco County Fair Building



PHOTO: E. EISENSHARDT

Sulphur - Italy

Featuring a special presentation by Dr. Jean De Mouthe of the Academy's Geology Department on Sunday at 2 pm.

Academy members receive discounted admission. For more information, call (415) 564-4230.

### Outstanding Volunteer: Bill Munich—Versatile and Reliable



PHOTO: DONG LIN

Bill Munich

Since 1984, Bill Munich—a native San Franciscan—has volunteered at the Academy of Sciences each week, helping Dr. Jean De Mouthe, the Academy's Senior Collection Manager in the Geology Department.

After selling industrial chemicals for 37 years, Bill retired and decided to volunteer at the Academy because, as he says, he'd "been going there and enjoying it since 1926." With a Masters degree in Chemistry from Stanford University, his placement in the Geology department was a logical fit. But more importantly, Bill has enjoyed collecting mineral specimens over the years and has donated much of his collection to the Geology Department. Bill also solicited funds from his former employer, Van Waters and Rogers, for the purchase of a diffractometer, a technical device used for mineral identification which, according to Dr. De Mouthe, the department would not otherwise own.

Bill modestly describes his volunteer role as doing "whatever Jean needs me to do." Jean, on the other hand, is full of praise for the many tasks he accomplishes, such as working on the fossil and mineral collections, preparing labels, straightening out the library, and recycling for the department. (He also washes the floor, cleans the counters, unclogs the drain and rearranges furniture, but don't tell his wife Carola, or we could lose a good volunteer!) Jean sums up Bill's volunteer contributions by saying, "we're very lucky to have him, and you can quote me on that!" We agree.

## Oracle Corporation Renews Madagascar Research Funding

The Academy is pleased to announce that Oracle Corporation has generously renewed its sponsorship of biodiversity research on the island of Madagascar. The \$25,000 grant will enable Academy scientists and students in Madagascar to continue their exploration of a biologically rich and largely unexplored part of the world. A major goal of the Madagascar Research Initiative has been to expand worldwide knowledge of the biodiversity of the island with the aim of aiding that country's conservation efforts.

The Madagascar project, now entering its third phase, is the first major undertaking of the Academy's Center for Biodiversity Research and Information, founded to promote collaborative study and develop shared information management systems among biologists. The Center will ultimately serve to facilitate knowledge of global biodiversity and help contribute to a growing spirit of stewardship for the natural world. Phase III Madagascar research has also been generously funded by the McBean Family Foundation.

### Academy Travel

#### Australia's Great Barrier Reef (with optional extension to Daintree National Park)

December 4 – 13, 2000 aboard the Coral Princess II  
with Bob Van Syoc

Whether you prefer snorkeling the Great Barrier Reef—the world's largest living organism—or just relaxing aboard your privately chartered ship, this opportunity to explore Australia simply can't be missed. Spend a day in Sydney enjoying customized tours including a "behind-the-scenes" glimpse of Taronga Centre, considered one of the best zoos in the world. Cruise to Lizard Island and embrace the same view Captain James Cook and his crew witnessed over 200 years ago. Swim with enormous potato cod and observe moray eels at Cod Hole. Take advantage of the crystal clear water (with visibility up to 90 feet) to see spectacular species of pelagic fish and beautiful coral gardens of the Outer Ribbon Reefs.

Join the post-trip extension to Daintree National Park, where you'll stay in chalets on stilts overlooking the rainforest and Mossman River. Enjoy a wilderness safari to Cape



PHOTO: BILL WOOD

Reef anemone with clownfish

Tribulation and drive into Atherton Tablelands, home of the world's rarest trees and wildlife.

*Cost: \$4,490 - \$4,690 per person (based on double occupancy) plus airfare of \$1,650*

#### Treasures of the Lower Caribbean (with optional extension to the Orinoco River)

December 21-29, 2000 aboard the Yorktown Clipper  
with Luis Baptista

Explore the Lower Caribbean and northern Venezuela, a diverse world generously endowed with natural beauty. This custom-designed itinerary includes stops at the islands of Trinidad, home to the widest range of plant and animal species of any Caribbean island, and Tobago, where a snorkeling excursion lends the opportunity to see nurse sharks and giant queen and French angelfish. After swimming or snorkeling in Bonaire's world-renowned Marine Park, accompany the naturalists ashore to look for exotic birds, including blue-and-yellow macaw and the large-billed toucan.

The post-trip extension follows the winding course of the 1,600-mile-long Orinoco River, the eighth-largest river delta in the world. Come face-to-face with complex ecosystems that are rich in flora and fauna, and native lifestyles that reflect the cultures and traditions of a place set apart.

*Cost: \$2,550 to \$3,930 per person (based on double occupancy) plus air.*



Blanchisseuse, Trinidad

#### Penguin Club

In keeping with the Academy's mission to explore and explain the natural world, our Travel Program has been going strong for 30 years. This year's destinations, all led by Academy scientists, include Patagonia, Antarctica, Mexico's Copper Canyon, and Southern India. On March 7, the Academy held a reception for the "Penguin Club," alumni of recent and regular participants in the Academy Travel Program. Lonely Planet Publications, Inc., High Country Passage, Inc., Rand McNally Map & Travel Store, TravelSmith, and Adolph Gasser Photography kindly sponsored this year's Penguin Club Reception.

## Order Form

**YOUR NAME:** \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Member # \_\_\_\_\_

### SPECIAL LECTURES

	Qty/Members	Qty/Non-members	Total
California Native Flowers	___X\$6	___X\$10	=
Evolution/Coral Reefs	___X\$6	___X\$10	=
Cnefarious Cnidarians	___X\$6	___X\$10	=

### B. DEAN LECTURES

	Qty/Members	Qty/Non-members	Total
Splendid Skies Over N. America	___X\$3		=
The Story of the Universe	___X\$3		=
Sky Stories From Latin America	___X\$3		=

### ADULT AND FAMILY

	Qty/Members	Qty/Non-members	Total
Pine Needle Baskets	___X\$60	___X\$70	=
Flora Mt. Lassen National Park	___X\$395	___X\$420	=
Natural History of the Mono Basin	___X\$365	___X\$395	=
San Andreas Fault	___X\$45	___X\$55	=
Monterey Bay Wildlife Cruise	___X\$65	___X\$75	=
Exploring Mt. Saint Helena			
Adults	___X\$20	___X\$15	=
Children	___X\$25	___X\$20	=
Discover Devil's Gulch			
Adults	___X\$20	___X\$15	=
Children	___X\$25	___X\$20	=

### JUNIOR ACADEMY

Mail the registration form in the back of your member Course Catalog to: Education Programs, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118. Or fax your registration form to (415) 750-7367. To receive a course catalog, call (415) 750-7100.

**ACADEMY DROP DEAD BALL** Qty/Members Qty/Non-members Total  
Individual Tickets \_\_\_X\$100 \_\_\_X\$125 =

### DONATIONS

- ☐ I would like to support the Academy of Sciences with a donation. \$ \_\_\_\_\_  
☐ Please send me information about effective gift and personal planning in 1999.  
☐ Please send me information about life income gifts and bequests to the Academy  
☐ I have already provided for the Academy in my will or other estate plans.

### TAX-WISE GIVING

- ☐ Please send me your year-end tax-wise giving brochures.

### GIFT MEMBERSHIP FORM

\$60 Family or Grandparent

I wish to give a gift membership to: \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Phone( ) \_\_\_\_\_

Payment enclosed: \_\_\_\_\_

**TOTAL PAYMENT ENCLOSED** \$ \_\_\_\_\_ ☐ Check (made payable to CAS)

☐ Visa ☐ Mastercard ☐ American Express (\$10 minimum on credit card orders)

Card Number \_\_\_\_\_ Exp. Date \_\_\_\_\_

Daytime Phone \_\_\_\_\_

Mail payment and order form to: Membership Office, Ticket Services, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118-4599.

Include a self-addressed, stamped envelope for each series to which you subscribe.  
No refunds/exchanges.

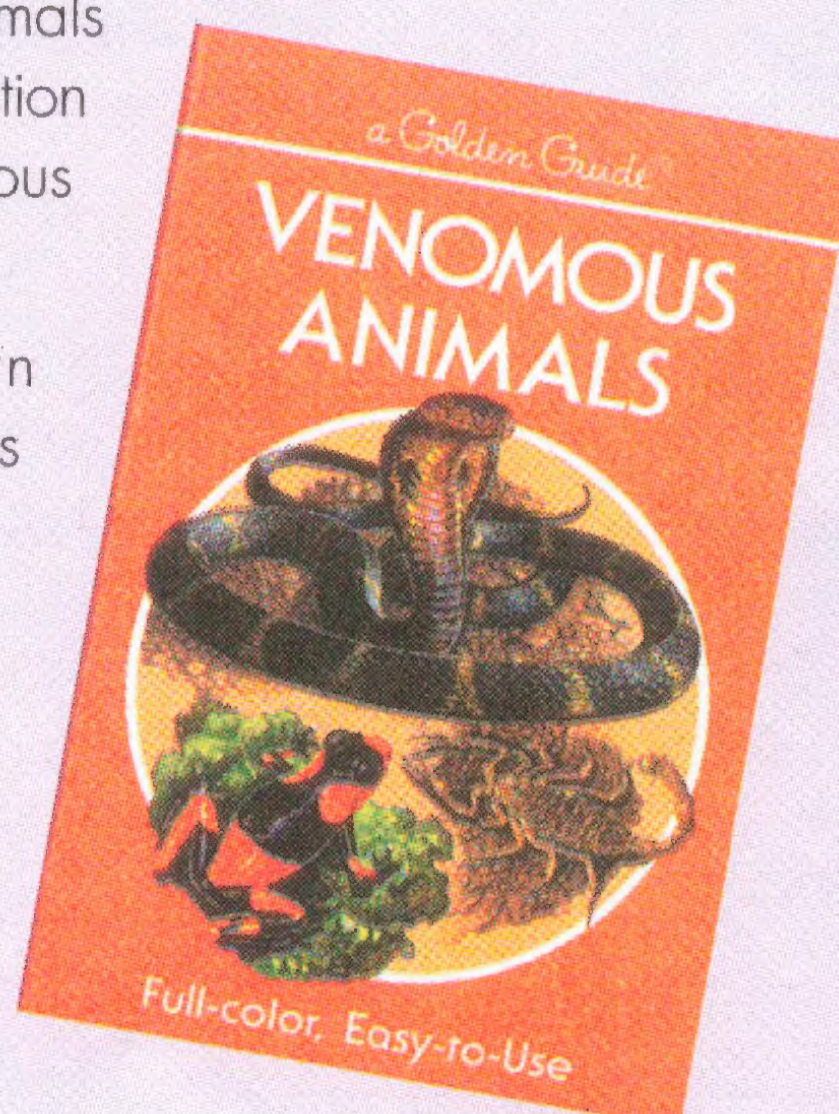
## Venomous Animals: 300 Animals in Full Color

This paperback guide to venomous animals offers a colorful and easy-to-read introduction to all of the major groups of venomous animals.

Readers, young or old, will learn fascinating facts about 300 venomous animals.

Visit the Slither Inn Store to purchase this guide for \$5.95. Copies are also available in the Main Store of the Academy.

Academy members receive a 10% discount off all merchandise.



Visit the Academy Store online at:

[www.calacademy.org/casstore/store.html](http://www.calacademy.org/casstore/store.html) or call (415) 750-7410



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# In Retrospect...

By Academy Archivist Michele Welck

## 125 Years Ago

June 7, 1875 – “Henry Edwards presented a paper on ‘Pacific Coast Lepidoptera, No. 12 – On some New Species of Noctuidae.’ Dr. Kellogg described a new lily, *Lilium maritimum*, from the vicinity of San Francisco. Dr. Henry Gibbons made verbal remarks on ‘Clouds.’

*Dr. Albert Kellogg was a druggist who much preferred to spend his time in botanical pursuits. He published descriptions of over 200 species, but many did not stand the test of time, a not uncommon experience. Lilium maritimum is one of the survivors.*

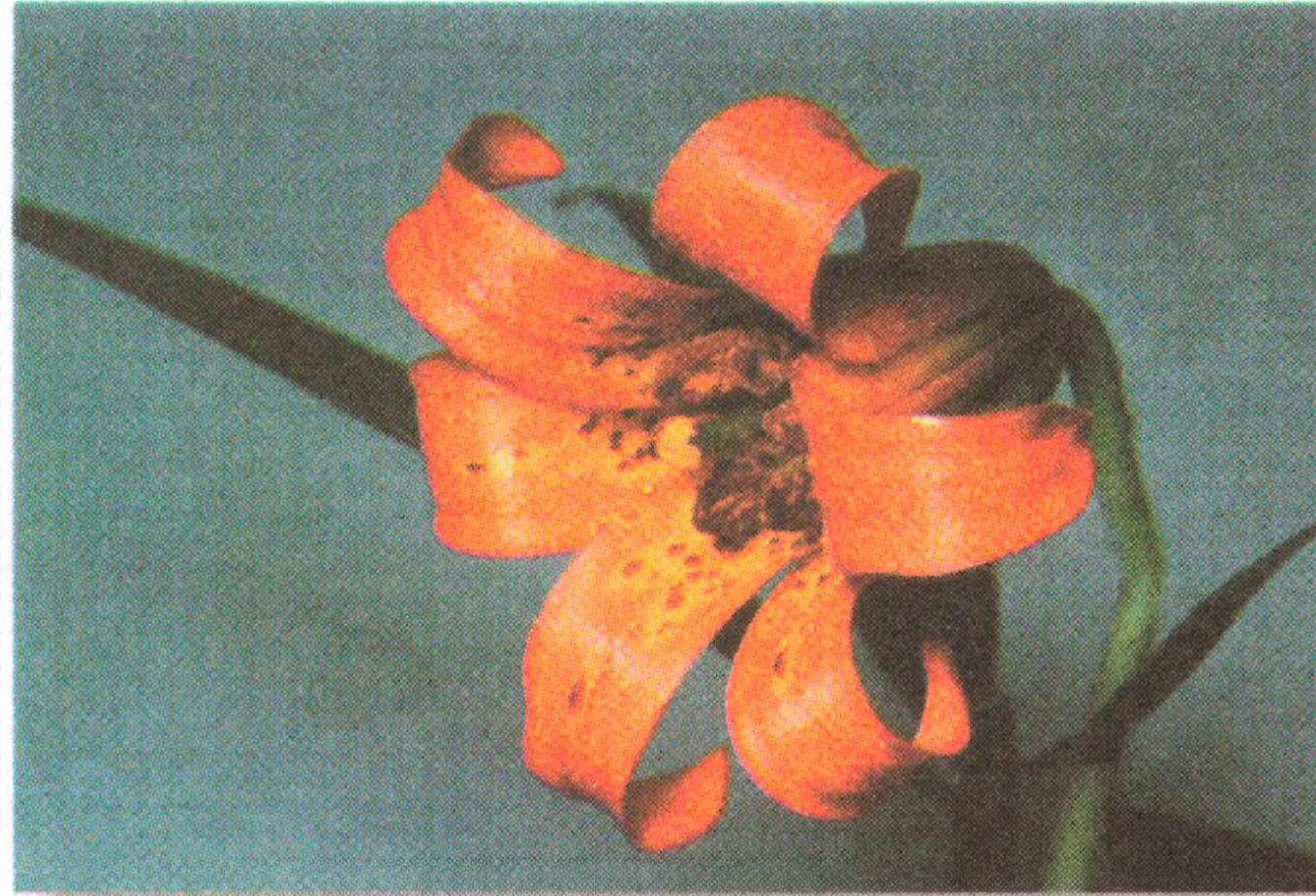
## 50 Years Ago

June 1950 – Mr. T. E. Johnson telephoned the Academy to report an unusual occurrence - a basking shark had washed ashore on the beach near his home at Sharp Park. A team of enthusiastic ichthyologists and aquatic biologists (Dr. W. I. Follett, Dr. Earl S. Herald, Lillian Dempster, and Robert Dempster) grabbed their gear and headed to the site. The 25-foot specimen was in a “very

post mortem condition” and the only items collected were teeth, skin, and part of the tail. Upon return to the Academy, their prizes reportedly caused windows to be flung open all over the building.

*The Academy now has parts of six different basking*

*sharks in its ichthyological collections; the one found in 1950 was our third. And there are still times at the Academy when a particularly “aromatic” new specimen dramatically increases the desire for fresh air.*



*Lilium maritimum*, first described by Academy founder Dr. Albert Kellogg in 1875. This species is now listed by the California Native Plant Society as “very rare.”

## Kids, Gather your sleeping bags, and come to the best slumber party in town...the Striking Beauty Sleep-Over Featuring the VENOMS Exhibition

August 26 & 27 (Saturday & Sunday)



**Explore the Natural History Museum and search for clues to the mystery hunt...  
Swing Into Orbit In Our Portable Planetarium...  
Deep Sea Dive without scuba gear.**

**WHO...**Kids ages 7–12. Age restrictions are firm.

**TIME...**Check-in at 6:30pm, Saturday. Depart 8:00 am, Sunday.

**COST...**\$50 per child (\$60 for non-Academy members). Checks payable to: California Academy of Sciences.

**DEADLINE...**Postmark by Friday, August 11. Registrations are processed by postmark date. Participants must be pre-registered.

Please note participants will not be sleeping in the Venoms exhibit hall.

**Registration Form      Striking Beauty Sleep-Over      August 26 & 27, 2000**

Camper's Last Name/First/Middle

Age

Address/City/State/Zip Code

Parent/Guardian's Name

CAS Member #

Work Phone

Home Phone

List any health or physical problems your child has (asthma, allergies, etc.)

Parent/Guardian Signature

Date

**Mail or Fax this form to:** California Academy of Sciences, Department of Group Sales, Golden Gate Park, San Francisco, CA 94118 or Fax: (415) 750-7346. **Questions:** email: [mprice@calacademy.org](mailto:mprice@calacademy.org) or phone (415) 750-7460.

## June

### 3 Saturday

Asian Treasure Bag  
Traditional Arts, 1 pm (p. 7)  
Exploring Mt. Saint Helena  
Field Trip: 10 am–3 pm (p. 9)

### 4 Sunday

Painting "The Book of Cranes"  
12:30–3 pm (p. 5)  
Killer Bees: The True Buzz  
12:30 & 2:30 pm (p. 6)

### 6 Tuesday

Color Me Deadly  
12:30 & 2:30 pm (p. 6)

### 8 Thursday

Striking Fishes  
1 pm (p. 6)

### 10 Saturday

Guatemalan Weaving  
Traditional Arts, 1 pm (p. 7)

### 11 Sunday

Rattlesnakes Alive!  
12:30 & 2 pm (p. 6)

### 13 Tuesday

Snake Mimicry  
12:30 & 2:30 pm (p. 6)

### 14 Wednesday

Saving The Gray Whale  
Members Only Lecture:  
2 & 7:30 pm (p. 4)  
Dangerous Liaisons  
2 pm (p. 6)

### 15 Thursday

Let It Bee Venom  
12:30 & 2:30 pm (p. 6)  
Classical Music & Birdsong Chat  
6 pm (p. 2)

### 16 Friday

New Sky Show Opens:  
Into the Depths of Night (p. 11)

### 17 Saturday

"Boss Blues Harmonica"  
Traditional Arts, 1 pm (p. 7)  
Pine Needle Baskets  
Workshop: 10 am–4 pm (p. 8)  
Discover Devil's Gulch—Field Trip  
9:30 am–1:30 pm (p. 10)

### 18 Sunday

Paper Crane Folding  
11:30 am–3 pm (p. 5)  
Tarantula: Beauty or Beast?  
12:30 & 2:30 pm (p. 6)

### 20 Tuesday

Dangerous Liaisons  
see June 14  
Splendid Skies Over North  
America  
7:30 pm (p. 10)

### 22 Thursday

Striking Fishes — see June 8  
California Native Flowers  
Lecture: 7:30 pm (p. 8)

### 24 Saturday

Paper Crane Folding  
see June 18  
Studying Venomous Snakes  
12:30 & 2:30 pm (p. 6)  
Korean Cooking  
Traditional Arts, 1 pm (p. 7)  
The San Andreas Fault  
Seminar and Field Trip:  
9 am–5 pm (p. 9)

### 26 Monday

Evolution . . . on Coral Reefs  
Lecture: 7:30 pm (p. 8)

### 29 Thursday

Killer Bees: The True Buzz  
see June 4

## July

### 2 Sunday

Killer Bees: The True Buzz  
see June 4

### 6 Thursday

Black Widows To Go  
12:30 pm (p. 6)

\*\*\*\*\*CAR-RT SORT\*\*C-019  
DR. PAUL H. ARNAUD AND MRS. MADELINE M. ARNAUD  
3955 RESTON CT  
SOUTH SAN FRANCISCO CA 94080-3946

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### 8 Saturday

The Drop Dead Ball (p. 2)

### 9 Sunday

Paper Crane Folding  
see June 18

### 11 Tuesday

Dangerous Liaisons  
see June 14

### 12 Wednesday

Seabirds and Marine  
Mammals of Monterey Bay  
Members Only Lecture:  
2 & 7:30 pm (p. 4)

### 13 Thursday

Striking Fishes — see June 8

### 14 Friday

Killer Bees: The True Buzz  
see June 4

### 16 Sunday

Painting "The Book of Cranes"  
see June 4  
Striking Fishes — see June 8

### 18 Tuesday

Color Me Deadly — see June 6  
The Story of the Universe  
7:30 pm (p. 10)

### 22 Saturday

Tarantula: Beauty or Beast?  
see June 18  
"The Stolen Bairn and the Sidh"  
Traditional Arts, 1 pm (p. 7)

### 23 Sunday

Paper Crane Folding  
see June 18  
Rattlesnakes Alive! — see June 11

### 25 Tuesday

Let It Bee Venom — see June 15

### 27 Thursday

Dangerous Liaisons  
see June 14

### 28 Friday

Natural History of the Mono  
Basin  
Field Trip: Departs 9 am (p. 9)

### 29 Saturday

Breads of India  
Traditional Arts, 1 pm (p. 7)

### 30 Sunday

A Thousand Cranes closes  
Studying Venomous Snakes  
see June 24

### MEMBER INFORMATION

Guided Tours:  
Free one-hour highlight tours daily  
Laserium Shows:  
Call for information  
(415) 750-7138  
Open every day of the year.  
Summer hours (Memorial Day  
weekend to Labor Day)  
9 am–6 pm  
Information Hotline:  
(415) 750-7145  
Website:  
www.calacademy.org  
Weekend Information:  
750-7375

The Academy strongly encourages  
the use of public transportation to  
and from Golden Gate Park. Visit  
our website for details.



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